IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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1 of 3

Docket No. 6783 (500.0034)

In re application of:

Zimmerman et al.

Serial No. 08/646,565

Filed: May 8, 1996

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Group Art Unit: 2773

Examiner: Sax, S.

For: **SYSTEM AND METHOD FOR MANAGING ELECTRONIC PRICE LABEL OVERLAYS**

Assistant Commissioner
   for Patents
Washington, D.C. 20231

Dear Sirs:

Transmitted herewith for filing is an Appeal Brief and two copies thereof in response to the Final Rejection dated July 10, 1998.

   X   Please charge Deposit Account No. 14-0225 for the Appeal Brief fee or any other fees associated with the filing of said Appeal Brief.

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Our telephone number is: (937) 445-2990.

Respectfully,

Paul W. Martin
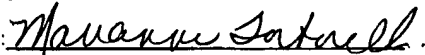
Attorney for: Zimmerman et al.

NCR 6781
500.0034

Patent

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

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Serial No.	:	08/646,565
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January 7, 1999

COVER SHEET FOR
APPELLANTS' BRIEF ON APPEAL

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Chapel Hill, North Carolina
January 7, 1999

Commissioner of Patents
 and Trademarks
Washington, D.C. 20231

APPELLANTS' BRIEF

Sir:

1.   The Real Party In Interest

The real party in interest is the assignee, NCR Corporation.

2.   Related Appeals and Interferences

None.

3.   Status of the Claims

This is an appeal from the July 10, 1998 final rejection under 35 U.S.C. § 102(e) of

claims 1, 5 and 18 based on Kosarew U.S. Patent No. 5,619,416 ("Kosarew"), and the 35 U.S.C. 103 rejection of claims 6-16, 17 and 19 based on Kosarew.

4. Status of Amendments

An amendment after final was filed October 13, 1998. It was indicated by an Advisory Action mailed October 28, 1998 that the proposed amendment would be entered on appeal, but that the claims still did not distinguish over the art.

5. Summary of the Invention

The present invention is entitled "System and Method for Managing Electronic Price Label Overlays." It relates generally to improvements to electronic price label (EPL) systems, and more particularly to advantageous aspects of methods and apparatus for managing EPL overlays as those overlays change during operation of an EPL system in an environment such as a transaction establishment or store. As described in the Background of the Invention on page 1 of the present application, electronic shelf or price label systems typically include a plurality of EPLs for the items in a store. These EPLs are typically attached to shelf labels and located adjacent to items for which they electronically display the item price. The EPLs are coupled to a central server located in the store from which prices for all of the displays can be changed. A price look up (PLU) file typically stores all of the prices for the store. In order to reduce the cost of EPL systems, only a limited amount of frequently changing information, such as price information is displayed electronically. Other less frequently changing information, such as item descriptions and product codes, is displayed through signs or overlays attached to the EPL.

Typically, a store employee must attach a new overlay each time a new product is added or when information for an existing product changes, such as when a sale or promotion occurs.

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Also, once attached, overlays must be checked to determine if their information is current and correct. Such tasks are both labor-intensive and time consuming.

Among its other advantages, the present invention provides a system and method for the in store management of electronic price label overlays. This system can automatically schedule printing of new up to date overlays. To this end, a mechanism is provided to determine electronic price label information and price look-up file descriptions that have been added or changed for particular price labels during operation of the EPL system in the store. In one embodiment, additions and changes in overlay data are marked and identified by the marks to create a print data file.

By way of example, claim 1 of the present invention reads as follows:

1.   A method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system comprising the steps of:

making a change to an EPL data file in the EPL system for an EPL;

marking the change;

recording a command to print an overlay;

reading the EPL data file for the marked change; and

creating a print file for printing an overlay containing the change.

As illustrated in Fig. 1, a first embodiment of an electronic shelf label system 10 includes EPL computer 12, electronic price labels (EPLs) 14, overlays 16, and overlay printer 18. Page 4, lines 6-9. EPLs 14 preferably electronically display price information for adjacent merchandise items, although additional information may be employed. Page 5, lines 13-15. Overlays 16 are attached to EPLs 14 and include printed information such as item descriptions, item bar code

labels, item identification numbers and promotional information. Overlays 16 may be made of paper or plastic, and may be attached using adhesives or other fasteners. Page 5, lines 16-21.

The EPL computer 12 controls operation of system 10. Price and other information electronically displayed by EPLs 14 may be changed by the EPL computer 12 on an ongoing basis. For example, for a sale on a brand of soda the sale price for soda is entered by store personnel and EPL computer 12 changes the display for the appropriate EPL or EPLs 14 for the brand of soda. EPL computer 12 also executes overlay data management program 32 which controls the printing of overlays 15 and overlay printers application 34 which prepares overlay information for printing. Page 4, lines 12-19. So for the example, an updated overlay promoting the sale item can be printed.

6.   The Issues For Review

The issues for review are whether claims 1-5 and 18 rejected under 35 U.S.C. 102(e) were properly rejected based on Kosarew and whether claims 6-16, 17 and 19 were properly rejected under 35 U.S.C. 103. In other words, were the standards of 35 U.S.C. §§ 102 and 103 properly applied in the present case?

7.   Grouping of Claims

The rejected claims do not stand or fall together. The claims should initially be considered in six Groups I-VI based upon the differences between the independent claims: namely, Group I, claim 1; Group II, claim 2; Group III, claim 3; Group IV, claim 4; Group V, claim 5 and Group VI, claims 6-19. For anticipation under 35 U.S.C. § 102, the reference must teach every aspect of the claimed invention. MPEP § 706.02, p. 700-10. 35 U.S.C. § 103 which governs obviousness indicates that "differences between the subject matter sought to be patented

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and the prior art" are to be assessed based upon "the subject matter as a whole". Under either analysis, the entirety of each claim must be considered.

The independent claims 1- 6 address a "method of managing EPL overlay data as the EPL overlay data changes during operation on an EPL system . . ." (claim 1), a "method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system in a store . . ." (claim 2), a "method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system in a store" comprising specific "copying" and "comparing steps" (claim 3); a " method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system in a store" comprising steps of marking a change made to the EPL data file, "reading the EPL data file for the marked change" and "creating a print file for printing an overlay containing the change" (claim 4); a "method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system" comprising specific "copying", "creating", "determining", "marking", "recording", "comparing" and "creating" steps (claim 5); and a "system for managing EPL overlay data as the EPL overlay data changes during operation of an EPL system having "a store based computer . . ." (claim 6).

The following additional subject matter groupings are noted: a system in which the store based computer further operates to read "the EPL data file for a marked change" (claim 7); a system in which the store based computer further operates to read "the EPL data file for a marked change and compares PLU descriptions in a PLU descriptions file to the PLU file to determine the change" (claim 8); a system in which the store based computer creates "a master overlay data file" and "compares" said file as claimed "to determine a third set of data representing the change" (claim 9); "an overlay data management program" (claims 10-14); "master overlay data

file includes descriptions of products from the PLU file" (claim 11); "master overlay data file" includes specific information from within the EPL data file (claim 12); "temporary overlay data file includes new and updated descriptions of products" (claim 13); "print data file" results from the claimed "comparison" (claim 14); "overlay printer" (claim 15); "EPL data file manager which marks . . . with one or more flags or dirty bits, as each EPL record is added or changed" (claim 16, 17 and 19); the store based "computer operates in conjunction with an overlay data management program which operates to determine said change in the EPL data file by reading the EPL data file for records marked with one or more flags or dirty bits" (claim 17); "storage medium for storing the print file" (claim 18); and "user-configurable filters that determine fields defining the dirtiness of a record" (claim 19).

8.   Argument

The rejections under 35 U.S.C. §§ 102 and 103 did not follow MPEP § 706.02 which states at page 700-10:

> for anticipation under 35 U.S.C. 102, the reference must teach every aspect of the claimed invention . . . in a rejection based on 35 U.S.C. 103, the reference teachings must somehow be modified to meet the claims. The modification must be one which would have been obvious to one of ordinary skill in the art at the time the invention was made.

In contrast with this clear statement, the Official Action looks to a single prior art patent addressing a different problem in a different context. The art relied upon does not teach the presently claimed invention. Furthermore, it fails to recognize the problems addressed and advantageously solved by the present invention much less suggest the present solution. Nonetheless, the Official Action suggests the present claims are either anticipated or obvious therefrom. This finding should be reversed.

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A.   The Art Rejection

The sole grounds of rejection are based upon Kosarew. As addressed in greater detail below, those rejections are not supported by the relied upon art. While Kosarew describes a highly advantageous technique for automatically labeling a batch of electronic price labels consistent with a Customer Data File (CDF). See, col. 3, lines 56-67. It does not anticipate and does not make obvious the presently claimed methods and systems for updating EPL overlays once the EPLs are in operation in a store and it is necessary to change the overlay to reflect ongoing changes in information.

Taking claim 1 of the present invention, by way of example, that claim addresses a "method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system". The method comprises the steps of "making a change . . .", "marking the change . . .", "recording a command to print an overlay", "reading the EPL data file for the marked change", and "creating a print file for printing an overlay containing the change".

For example, assume that Product X associated with an EPL is replaced by New Improved Product X. An operator then changes the EPL data files to reflect this change. See, for example, col. 6, lines 5 and 6. Such changes are typically ongoing and frequent. At a desired point in time, the operator enters a command to print overlay data. Changed records, such as the change from Product X to New Improved Product X are determined, as discussed, for example, at page 6, lines 17-22. A print file is created for printing an overlay containing the change, i.e., New Improved Product X. Store personnel then attach the overlay to the correct EPL. Other changes in overlays may result from product sales, promotions and the like.

The Official Action analyzes Kosarew with respect to claim 1 as follows. The Official

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Action states "Kosarew shows a method of managing electronic price label (EPL) overlay data as it changes during operation" citing the Kosarew Abstract. Claim 1, however, recites that the claimed operation is "during operation of an EPL system". Claims 2-4 and 6 recite that this operation is "in a store". By contrast, Kosarew describes a batch process, such as an original manufacturing process. Data is not managed by Kosarew "during operation of an EPL system" as presently claimed. Cf. Kosarew, col. 1, lines 25-31 (programmed during manufacture); col. 1, lines 63-66 (continuous process); col. 3, line 9 (original manufacture); col. 3, lines 57-64 (batch processing); col. 4, lines 37-39 (batch mode for processing a specific order for a specific merchant); col. 8, lines 15-19 (speed of production); and col. 8, lines 46-49 (completed batch of tags 10 then distributed to the merchant). Kosarew Fig. 5 embodiment shows a conveyor. The distinction between normal in store ongoing operation and original manufacture or offsite labelling is a fundamental distinction such that Kosarew does not anticipate and does not make obvious the present claims on this basis alone.

The Official Action continues by stating Kosarew "makes a change to an EPL data file and marks it" citing Kosarew col. 2, line 63 through col. 3, line 10. Col. 2, line 63 through col. 3, line 10 of Kosarew describes the operation of an EPL system in a store in which the tag 10 is secured to a shelf adjacent a product and reprogrammed remotely. This portion of the Kosarew disclosure does not describe either the method or the apparatus of Kosarew, but rather tag operation in a store subsequent to EPL batch labeling. More importantly, there is no indication in the cited text that a change is recognized as such or marked in the manner presently claimed.

The Official Action continues by suggesting Kosarew "reads the EPL data file for the marked change" citing Kosarew col. 4, lines 30-55 and col. 5, lines 53-65; and creates a print file

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for printing an overlay containing the change" citing Kosarew col. 4, lines 37-57 and Kosarew col. 6, lines 17-52. This appears to be a misreading of Kosarew. Col. 4, lines 30-55 and col. 5, lines 53-65 of Kosarew appear to address the correlation of unique record numbers (RNs) and serial numbers (SNs) in a Customer Data File (CDF), while col. 4, lines 37-57 and col. 6, lines 17-52 also address the correlation of RNs and SNs with some additional discussion of how RNs may advantageously be employed in the event an EPL is defective for some reason. Quite simply, this relied upon portion of Kosarew does not have any apparent relation to any change allegedly marked at Kosarew col. 2, line 63 through col. 3, line 10. More importantly, the cited language does not meet the present claims and does not make them obvious.

B.   Summary of Factual Analysis of the Section 103 Rejections

Kosarew's approach differs fundamentally from that of the presently claimed invention. It does not anticipate. Furthermore, as a result of this fundamental difference in context, Kosarew should be considered a very weak reference for purposes of any analysis under of Section 103. Quite simply, one would not look to such a different approach to solve the problems which are advantageously addressed by the present invention. Kosarew does not fairly show and does not fairly suggest the advantageous, novel and nonobvious combinations of elements and steps presently claimed.

C.   The Finding of Anticipation is Contrary
to Applicable Precedent Governing Such Findings

Kosarew simply does not teach every aspect of claims 1, 5 and 18 as required under 35 U.S.C. § 102 and MPEP § 706.02. As addressed by the Federal Circuit, Anticipation under Section 102 can be found only if a reference shows exactly what is claimed, where there are differences between the reference disclosure and the claim, a rejection must be based on

obviousness under Section 103. Titanium Metals Corp. v. Banner, 227 U.S.P.Q. 773 (Fed. Cir. 1985). Here, there are clear differences and Section 102 does not apply.

        D.   The Examiner's Finding of Obviousness is Also
                 Contrary to Law of the Federal Circuit

As shown above, the invention claimed is not taught. It is also not suggested by the relied upon prior art. The sole reference cited by the Examiner, if anything, actually teaches away from the present invention as it addresses techniques suitable for original manufacture and not typical ongoing everyday store operation of EPL systems. As noted by the Federal Circuit when addressing a multiple reference rejection, "[i]t is impermissible to use the claims as a frame and the prior art references as a mosaic to piece together a facsimile of the claimed invention." Uniroyal Inc. v. Ludkin Riley Corp., 5 U.S.P.Q. 303, 312 (Fed.Cir. 1983), cert. den., 469 U.S. 851 (1984). Of course, the same is true with respect to modifying a single reference. Similarly, "[t]he mere fact that the prior art could be so modified would not have made the modification obvious unless the prior art suggested the desirability of the modification." In re Laskowski, 10 U.S.P.Q. 2d 1397, 1398 (Fed. Cir. 1989), quoting In re Gorgon, 221 U.S.P.Q. 1125, 1127 (Fed. Cir. 1984). Here, there is no such suggestion.

In addition, the Examiner does not appear to have considered "where the references diverge and teach away from the claimed invention", Akzo N.V. v. International Trade Commission, 1 U.S.P.Q. 2d 1241, 1246 (Fed.Cir. 1986), cert den., 482, U.S. 909 (1987); and W.L.Gore Associates, Inc., 220 U.S.P.Q. at 311; nor has the Examiner read the claims as a whole, as required by statute. 35 U.S.C. 103. See also, Smithkline Diagnostics Inc. v. Helena Laboratories Corp, 8 U.S.P.Q. 2d 1468, 1475 (Fed. Cir. 1988); and Interconnect Planning Corp. v. Feil, 227 U.S.P.Q. at 551.
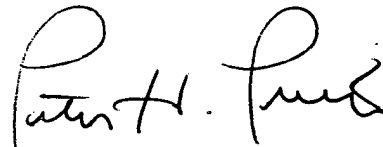
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In <u>In re Laskowski</u>, 10 U.S.P.Q. 2d 1397, the Federal Circuit reversed an obviousness rejection of the claims in an application for a bandsaw. The claimed bandsaw used a pulley type wheel loosely fitted with a tire. The primary reference showed a similar bandsaw where the band was tightly fitted. The Federal Circuit stated that the prior art did not provide a suggestion, reason or motivation to make the modification of the reference proposed by the Commissioner. <u>Id</u>. at 1398. The Court added that "there must be some logical reason apparent from the positive, concrete evidence of record which justifies a combination of primary and secondary references." <u>Id</u>. quoting <u>In re Regal</u>, 188 U.S.P.Q. 136, 139 (C.C.P.A. 1975), citing <u>In re Stemniski</u>, 170 U.S.P.Q. 343 (C.C.P.A. 1971).

Kosarew does not supply a suggestion that it should be modified as the Examiner's rejection suggests. It further appears that the Examiner did not consider and appreciate the claims as a whole focusing instead on individual steps or elements taken out of their claimed context. The present claims disclose a unique combination with many features and advantages not shown and not obvious from the sole applied reference.

Conclusion

Consequently, the rejection of claims 1-19 should be reversed and the application promptly allowed.

Respectfully submitted,

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APPENDIX

(Claims Under Appeal)

1.　A method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system comprising the steps of:

making a change to an EPL data file in the EPL system for an EPL;

making the change;

recording a command to print an overlay;

reading the EPL data file for the marked change; and

creating a print file for printing an overlay containing the change.

2.　A method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system in a store comprising the steps of:

copying PLU descriptions from a PLU file in the EPL system to a PLU descriptions file;

making a change to the PLU file for an item with an associated EPL;

recording a command to print an overlay;

comparing the PLU descriptions file to the PLU file to determine the change; and

creating a print file for printing an overlay containing the change.

3.　A method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system in a store comprising the steps of:

copying a first set of PLU descriptions from a PLU file in the EPL system to a master overlay data file;

copying a first set of EPL data from an EPL data file in the EPL system for a first set of EPLs associated with the first set of PLU descriptions to the master overlay data file;

recording a command to print overlays;

copying a second set of PLU descriptions from the PLU file to a temporary overlay data file;

copying a second set of EPL data from the EPL data file for a second set of EPLs associated with the second set of PLU descriptions to the temporary overlay data file;

comparing the master overlay data file to the temporary overlay data file to determine a third set of PLU descriptions that are different from the first set of PLU descriptions and a third set of EPL data that are different from the first set of EPL data; and

creating a print file for printing overlays containing the third set of PLU descriptions and the third set of EPL data.

4.   A method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system in a store comprising the steps of:

creating an EPL data file containing PLU descriptions from a PLU file in the EPL system and EPL data;

making a change to the EPL data file;

marking the change;

recording a command to print an overlay;

reading the EPL data file for the marked change; and

creating a print file for printing an overlay containing the change.

5.   A method of managing EPL overlay data as the EPL overlay data changes during operation of an EPL system comprising the steps of:

copying a first set of PLU descriptions associated with a first set of EPLs from a PLU file

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in the EPL system to a PLU descriptions file;

creating an EPL data file in the EPL system containing EPL data for the first set of EPLs;

determining whether the EPL data file has been changed;

if the EPL data file has been changed, marking the change;

recording a command to print an overlay;

comparing the PLU descriptions file to the PLU file to determine whether the PLU file has been changed;

if the PLU file has been changed, determining a second set of PLU descriptions that are different from the first set of PLU descriptions; and

creating a print file for printing overlays containing the change in the EPL data file and the second set of PLU descriptions.

6.   A system for managing EPL overlay data as the EPL overlay data changes during operation of an EPL system comprising:

a number of storage media for storing a PLU file and an EPL data file; and

a store based computer which determines a change in the PLU file or the EPL data file in the EPL system, and which creates a print file for printing an overlay for the change in the PLU file and EPL data file.

7.   The system as recited in claim 6, wherein the computer reads the EPL data file for a marked change.

8.   The system as recited in claim 6, wherein the computer reads the EPL data file for a marked change and compares PLU descriptions in a PLU descriptions file to the PLU file to determine the change.

9.	The system as recited in claim 6, wherein the computer creates a master overlay data containing first data in the PLU file and the EPL data file, creates a temporary overlay data file containing second data in the PLU file and the EPL data file, and compares the master overlay data file to the temporary overlay data file to determine a third set of data representing the change.

10.	The system of claim 6 wherein the computer operates in conjunction with an overlay data management program which creates a master overlay data file and a temporary overlay data file in addition to said print file.

11.	The system of claim 10 wherein the master overlay data file includes descriptions of products from the PLU file.

12.	The system of claim 10 wherein the master overlay data file includes information from within the EPL data file including PLU number, measure, unit of measure, package size, EPL serial number and price level.

13.	The system of claim 10 wherein the temporary overlay data file includes new and updated descriptions of products from the PLU file and the EPL data file since creation of the master overlay data file.

14.	The system of claim 13 wherein the print data file contains overlay information for new and updated records and results from a comparison of the master overlay data file with the temporary overlay data file by the overlay data management program.

15.	The system of claim 6 further comprising an overlay printer which prints an overlay for the print file upon receipt of a print command from the computer.

16.	The system of claim 6 further comprising an EPL data file manager which marks

each EPL record stored in the EPL data file with one or more flags or dirty bits, as each EPL record is added or changed by the EPL data file manager.

17.   The system of claim 16 wherein the computer operates in conjunction with an overlay data management program which operates to determine said change in the EPL data file by reading the EPL data file for records marked with one or more flags or dirty bits.

18.   The system of claim 6 further comprising a storage medium for storing the print file for possible reprinting later.

19.   The system of claim 16 further comprising user-configurable filters that determine fields defining the dirtiness of a record.